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LOWE HAUPTMAN HAM & BERNER, LLP
1700 DIAGONAL ROAD
SUITE 300
ALEXANDRIA, VA 22314

EXAMINER	
MCCLELLAND, KIMBERLY KEIL	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/705,228	YAMAMOTO ET AL.	
	Examiner	Art Unit	
	KIMBERLY K. MCCLELLAND	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 February 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,6,7,9-19 and 23-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6,7,9-19 and 23-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 9, 11, 13, 15-19, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,525,173 to Blenke et al. in view of U.S. Patent No. 6,505,791 to Syndikus et al. and U.S. Patent No. 6,123,882 to Uchida et al.

3. As to claim 9, Blenke et al. discloses a servomotor is used as said motor (column 8, lines 41-45).

4. As to claim 11, Blenke et al. discloses an apparatus for applying curved elastic to a moving web, including an arm being adapted to swing around the rotary shaft as the rotary shaft rotates (column 8, lines 50-52). However, Blenke et al. does not specifically disclose the materials used to make the arm.

5. Uchida et al. discloses a thermoplastic article, including structural members of a composite material comprising any one selected from the group consisting of carbon

fiber, glass fiber, metallic fiber, synthetic fiber, semi-synthetic fiber and natural fiber and any one selected from the group consisting of thermoplastic synthetic resin and thermosetting synthetic resin (column 1, lines 12-31; column 10, lines 56-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Uchida's teaching of a composite material for the material composition of the swinging arm disclosed by Blenke et al. The motivation would have been to use a material with strength rigidity, a high elastic modulus in a high-speed manufacturing apparatus (column 1, lines 12-31).

6. As to claim 13, Blenke et al. discloses said elastic members (22) are directed from said guide means (44) to said nip between said pair of press rolls (70/72) so that said elastic members coincide with a tangential line with respect to a region in which said pair of press rolls substantially contact each other (See Figure 2A).

7. As to claim 15, Blenke et al. discloses an apparatus for applying curved elastic to a moving web, including a pair of press rolls (70/72) substantially contacting each other, said press rolls (70/72) rotating in said machine direction around respective axes extending in said cross direction so as to feed said web (24) in said machine direction, and a guiding mechanism (44) located upstream of said pair of said press rolls (70/72) as viewed in said machine direction to oscillate said elastic members (22) in said cross direction; wherein said guide mechanism (44) comprises; a motor (82) having a rotary shaft (47) extending in a direction crossing said axes arid adapted to repeatedly reverse a rotational direction (column 8, lines 50-52); an arm connected with said rotary shaft and extending in a direction crossing said rotary shaft, said arm being formed on its

distal end with said guiding element(44) through which at least one of said elastic members (22) is passable, and said arm being adapted to swing around said rotary shaft as said rotary shaft rotates; and at least one feed member (34) located upstream of said rotary shaft (47) as viewed in said machine direction and adapted to direct said elastic members toward said guiding element (44); wherein an axis of said rotary shaft including press rolls (70/72) perpendicular to the guiding mechanism (44/46; See Figures 1-2A). Blenke et al. does not specifically disclose an arm connected directly with said rotary shaft or the rotary shaft is stationary relative to the axes of said press rolls or the materials used to make the arm.

8. Syndikus et al. discloses a thread traversing device, including it is known in the art of filament traversing devices to use a motor (8) having a rotary shaft (9) extending in a direction crossing said axes and adapted to repeat reversal of its rotational direction (See Figure 2); an arm (7) connected directly with said rotary shaft (9) and extending in a direction crossing said rotary shaft (9), said arm being formed on its distal end with guide means adapted for passage (15) of said elastic members, and said arm being adapted to swing around said rotary shaft as said rotary shaft rotates. It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the directly attached arm taught by Syndikus for the pivoting means disclosed by Blenke et al. The motivation would have been to provide better control over the oscillating movement of the guide means. Syndikus et al. discloses a thread traversing device, including it is known in the art of filament traversing devices with said rotary shaft (9) is stationary relative to the axes of said press rolls (See Figure 2). It would

have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the directly connecting arm taught by Syndikus for the pivoting means disclosed by Blenke et al. The motivation would have been to provide better control over the oscillating movement of the guide means.

9. Uchida et al. discloses a method of using thermoplastic, including structural members of a composite material comprising any one selected from the group consisting of carbon fiber, glass fiber, metallic fiber, synthetic fiber, semi-synthetic fiber and natural fiber and any one selected from the group consisting of thermoplastic synthetic resin and thermosetting synthetic resin (column 1, lines 12-31; column 10, lines 56-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Uchida's teaching of a composite material for the material composition of the swinging arm disclosed by Blenke et al. The motivation would have been to use a material with strength rigidity, a high elastic modulus during high-speed manufacturing processes (column 1, lines 12-31).

10. As to claim 16, Blenke et al. discloses a method of applying curved elastic to a moving web, including press rolls (70/72) with the elastic members are being fed and oscillated at the same time towards said nip (See Figure 2). . However, Blenke et al. does not specifically disclose maintaining an axis of said rotary shaft stationary relative to the axes of said press rolls while the elastic members are being fed and oscillated at the same time towards said nip.

11. Syndikus et al. discloses a thread traversing device, including it is known in the art of filament traversing to maintain an axis of said rotary shaft (9) stationary relative to

the axes of said press rolls (See Figure 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the directly connecting arm taught by Syndikus for the pivoting means disclosed by Blenke et al. The motivation would have been to provide better control over the oscillating movement of the guide means.

12. As to claim 17, Blenke et al. discloses said elastic members (22) are attached to said web by means of the adhesive only (column 4, lines 49-53) in regions corresponding to leg openings of the disposable wearing article being manufactured (column 9, line 56-column 10, line 5); said method further comprising cutting the elastic members between said regions so that the cut elastic members do not extend across an entire width of the disposable wearing article being manufactured (column 10, lines 25-28), and attaching an absorbent core to said web, wherein portions of the cut elastic members that have not been attached to said web contract to a relaxed state and are located near transverse edges of the absorbent core (column 11, lines 41-56).

13. As to claim 18, Blenke et al. discloses controlling rotational oscillating movements of the arm of each said guide means such that at least one of (i) the desired layout and (ii) a stretching ratio of the elastic members fed by one guide means is different from that of the elastic members fed by the other guide means (column 4, lines 2-4).

14. As to claim 19, Blenke et al. does not specifically disclose a rotational axis about which the arm swings coincides with a rotational axis of the rotary shaft.

15. Syndikus et al. discloses a thread traversing device, including it is known in the art of filament traversing to use a rotational axis about which the arm swings coincides with a rotational axis of the rotary shaft (See Figure 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the directly connecting arm taught by Syndikus for the pivoting means disclosed by Blenke et al. The motivation would have been to provide better control over the oscillating movement of the guide means.

16. As to claim 22, Blenke et al. discloses an apparatus for applying curved elastic to a moving web, including an arm being adapted to swing around the rotary shaft as the rotary shaft rotates (column 8, lines 50-52). However, Blenke et al. does not specifically disclose the materials used to make the arm. It would have been obvious to one having ordinary skill in the art to have determined the optimum value of cause effective variables such as arm weight, specific gravity, bending modulus, and length through routine experimentation in the absence of a showing of criticality. *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990). However, even though applicant's modification results in great improvement and utility over the prior art, it may still not be patentable if the modification was within the capabilities of one skilled in the art. In re Sola, 22 CCPA (Patents) 1313, 77 F.2d 627, 25 USPQ 433; In re Normann et al., 32 CCPA (Patents) 1248, 150 F.2d 627, 66 USPQ 308; In re Irmscher, 32 CCPA (Patents) 1259, 150 F.2d 705, 66 USPQ 314. More particularly, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Swain et al., 33 CCPA (Patents) 1250, 156 F.2d 239,

70 USPQ 412; Minnesota Mining and Mfg. Co. v. Coe, 69 App. D.C. 217, 99 F.2d 986, 38 USPQ 213; Allen et al. v. Coe, 77 App. D.C. 324, 135 F.2d 11, 57 USPQ 136.

17. Claims 1-2, 4, 6-7, 12, 14, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,525,173 to Blenke et al. in view of U.S. Patent No. 6,505,791 to Syndikus et al. and U.S. Patent No. 6,123,882 to Uchida et al. as applied to claims 9, 11, 13, 15-19, and 22 above, and further in view of U.S. Patent No. 5,660,664 to Herrmann.

18. With respect to claim 1, Blenke et al. discloses a method of applying curved elastic to a moving web, including feeding at least a single continuous web (24) in a machine direction as a component member of a disposable wearing article being continuously manufactured, feeding continuous elastic members (22) toward at least one surface of said web while said continuous elastic members are oscillated in a cross direction relative to said machine direction (See Figure 1), and attaching said continuous elastic members in a stretched state (column 9, lines 31-33) to said one surface in a accordance with a desired layout, wherein: in the step of feeding said web, the web is fed to a nip between a pair of press rolls (70/72) substantially being in contact with each other and adapted to rotate in said machine direction around respective axes extending parallel to each other in said cross direction; in the step of feeding said elastic members, the elastic members (22) are fed from upstream of said pair of press rolls (70/72) to the nip between said press rolls (70/72) via guide means (44) adapted to oscillate said elastic members (22) in said cross direction, and in the

step of attaching said elastic members, said elastic members (22) are attached to said web (24) by means of an adhesive (62); wherein each of said guide means comprises: a motor (82) having a rotary shaft (47) extending in a direction crossing said axes and adapted to repeat reversal of its rotational direction (column 8, lines 50-52); an arm connected with said rotary shaft and extending in a direction crossing said rotary shaft (47), said arm being formed on its distal end with guide means adapted for passage (44) of said elastic members (22), and said arm being adapted to swing around said rotary shaft as said rotary shaft rotates; and at least one feed member (34) located upstream of said rotary shaft as viewed in said machine direction and adapted to direct said elastic members toward said guide means (44); and wherein, in the course of running from said feed member to said pair of press rolls via said guide means, said elastic members are attached to said web while said elastic members are oscillated in said cross direction by said arm connected with said rotary shaft so as to repeat reversal of its swinging direction; said process further comprising arranging said axes of said pair of press rolls (70/ 72) vertically, said rotary shaft (47) of said motor (82) extends in a horizontal direction and said arm extends in said vertical plane from said rotary shaft toward said nip between said pair of press rolls (See Figures 1-2A; column 8, lines 50-52). However, Blenke et al. does not specifically disclose an arm connected directly with said rotary shaft or the materials used to make the arm.

19. Syndikus et al. discloses a thread traversing device, including it is known in the art of filament traversing devices to use a motor (8) having a rotary shaft (9) extending in a direction crossing said axes and adapted to repeat reversal of its rotational direction

(See Figure 2); an arm (7) connected directly with said rotary shaft (9) and extending in a direction crossing said rotary shaft (9), said arm being formed on its distal end with guide means adapted for passage (15) of said elastic members, and said arm being adapted to swing around said rotary shaft as said rotary shaft rotates. It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the directly attached arm taught by Syndikus for the pivoting means disclosed by Blenke et al. The motivation would have been to provide better control over the oscillating movement of the guide means.

20. Hermann discloses a machine for applying elastic, including arranging said axes of said press rolls horizontally (29/32a), said rotary shaft of said motor vertically (65), and said arm to extend horizontally (50/52) from said rotary shaft toward said nip between said press rolls (See Figures 1-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to rearrange the apparatus of Blenke et al. by rotating the current orientation 90º, such that the axes of the press rolls are vertical, the rotary shaft is horizontal, and the arm extends vertically as shown by Hermann. The motivation would have been to allow for the application of elastic at high working speeds (column 1, lines 29-31). In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) (Claims to a hydraulic power press which read on the prior art except with regard to the position of the starting switch were held unpatentable because shifting the position of the starting switch would not have modified the operation of the device.).

21. Uchida et al. discloses a method of using thermoplastic, including structural members of a composite material comprising any one selected from the group

consisting of carbon fiber, glass fiber, metallic fiber, synthetic fiber, semi-synthetic fiber and natural fiber and any one selected from the group consisting of thermoplastic synthetic resin and thermosetting synthetic resin (column 1, lines 12-31; column 10, lines 56-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Uchida's teaching of a composite material for the material composition of the swinging arm disclosed by Blenke et al. The motivation would have been to use a material with strength rigidity, a high elastic modulus during high-speed manufacturing processes (column 1, lines 12-31).

22. As to claim 2, Blenke et al. discloses a servomotor is used as said motor (column 8, lines 41-45).

23. As to claim 4, Blenke et al. discloses an apparatus for applying curved elastic to a moving web, including an arm being adapted to swing around the rotary shaft as the rotary shaft rotates (column 8, lines 50-52). However, Blenke et al. does not specifically disclose the materials used to make the arm.

24. Uchida et al. discloses a thermoplastic article, including structural members of a composite material comprising any one selected from the group consisting of carbon fiber, glass fiber, metallic fiber, synthetic fiber, semi-synthetic fiber and natural fiber and any one selected from the group consisting of thermoplastic synthetic resin and thermosetting synthetic resin (column 1, lines 12-31; column 10, lines 56-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Uchida's teaching of a composite material for the material composition of the swinging arm disclosed by Blenke et al. The motivation would have been to use a

material with strength rigidity, a high elastic modulus in a high-speed manufacturing apparatus (column 1, lines 12-31).

25. As to claim 6, Blenke et al. discloses said elastic members (22) are directed from said guide means (44) to said nip between said pair of press rolls (70/72) so that said elastic members are positioned in a plane a tangential to said press rolls in a region in which said press rolls substantially contact each other (See Figure 2A).

26. As to claim 7, Blenke et al. discloses said elastic members extend from said feed member to said guide means at a deviation angle of 10° or less relative to said vertical plane defined by the parallel axes of the press rolls (See Figure 2A).

27. Hermann discloses a machine for applying elastic, including arranging said axes of said press rolls horizontally (29/32a), said rotary shaft of said motor vertically (65), and said arm to extend horizontally (50/52) from said rotary shaft toward said nip between said press rolls (See Figures 1-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to rearrange the apparatus of Blenke et al. by rotating the current orientation 90º, such that the axes of the press rolls are vertical, the rotary shaft is horizontal, and the arm extends vertically as shown by Hermann. The motivation would have been to allow for the application of elastic at high working speeds (column 1, lines 29-31). In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) (Claims to a hydraulic power press which read on the prior art except with regard to the position of the starting switch were held unpatentable because shifting the position of the starting switch would not have modified the operation of the device.).

28. As to claim 12, Blenke et al. discloses said axes of said pair of press rolls (70/72) extend in a vertical plane, said rotary shaft (47) of said motor (82) extends in a horizontal plane and said arm extends in said vertical direction front said rotary shaft toward said nip between said pair of press rolls (See Figure 2A).

29. Hermann discloses a machine for applying elastic, including said axes of said press rolls extend horizontally (29/32a), said rotary shaft of said motor extends vertically (65), and said arm to extends horizontally (50/52) from said rotary shaft toward said nip between said press rolls (See Figures 1-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to rearrange the apparatus of Blenke et al. by rotating the current orientation 90º, such that the axes of the press rolls are vertical, the rotary shaft is horizontal, and the arm extends vertically as shown by Hermann. The motivation would have been to allow for the application of elastic at high working speeds (column 1, lines 29-31). In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) (Claims to a hydraulic power press which read on the prior art except with regard to the position of the starting switch were held unpatentable because shifting the position of the starting switch would not have modified the operation of the device.).

30. As to claim 14, Blenke et al. discloses said elastic members extend from said feed member to said guide means at a deviation angle of 10° or less relative to said vertical direction (See Figure 2A).

31. Hermann discloses a machine for applying elastic, including arranging said axes of said press rolls horizontally (29/32a), said rotary shaft of said motor vertically (65), and said arm to extend horizontally (50/52) from said rotary shaft toward said nip

between said press rolls (See Figures 1-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to rearrange the apparatus of Blenke et al. by rotating the current orientation 90º, such that the axes of the press rolls are vertical, the rotary shaft is horizontal, and the arm extends vertically as shown by Hermann. The motivation would have been to allow for the application of elastic at high working speeds (column 1, lines 29-31). In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) (Claims to a hydraulic power press which read on the prior art except with regard to the position of the starting switch were held unpatentable because shifting the position of the starting switch would not have modified the operation of the device.).

32. As to claim 23, Blenke et al. discloses an apparatus for applying curved elastic to a moving web, including an arm being adapted to swing around the rotary shaft as the rotary shaft rotates (column 8, lines 50-52). However, Blenke et al. does not specifically disclose the materials used to make the arm. It would have been obvious to one having ordinary skill in the art to have determined the optimum value of cause effective variables such as arm weight, specific gravity, bending modulus, and length through routine experimentation in the absence of a showing of criticality. *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990). However, even though applicant's modification results in great improvement and utility over the prior art, it may still not be patentable if the modification was within the capabilities of one skilled in the art. In re Sola, 22 CCPA (Patents) 1313, 77 F.2d 627, 25 USPQ 433; In re Normann et al., 32 CCPA (Patents) 1248, 150 F.2d 627, 66 USPQ 308; In re Irmscher, 32 CCPA (Patents) 1259, 150 F.2d 705, 66 USPQ 314. More particularly, where the general conditions of a claim are

disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Swain et al., 33 CCPA (Patents) 1250, 156 F.2d 239, 70 USPQ 412; Minnesota Mining and Mfg. Co. v. Coe, 69 App. D.C. 217, 99 F.2d 986, 38 USPQ 213; Allen et al. v. Coe, 77 App. D.C. 324, 135 F.2d 11, 57 USPQ 136.

33. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,525,173 to Blenke et al. in view of U.S. Patent No. 6,505,791 to Syndikus et al., U.S. Patent No. 6,123,882 to Uchida et al., and U.S. Patent No. 5,660,664 to Herrmann as applied to claims 1-2, 4, 6-7, 12, 14, and 23 above, and further in view of U.S. Patent No. 6,574,520 to Liu et al.

34. With respect to claim 3, Blenke et al. discloses a method of applying curved elastic to a moving web, including a servomotor (82) is used to rotate the rotary shaft (47; column 8, lines 50-52). However, Blenke et al. does not specifically disclose said servomotor is actuated by a controller containing therein a program adapted to rotate said servomotor on the basis of a running speed of at least said web in said machine direction and said layout desired for said elastic members.

35. Liu et al. discloses a method of manufacturing absorbent articles, including using servomotors actuated by a controller containing therein a program adapted to rotate said servomotor on the basis of a running speed of at least said web in said machine direction and said layout desired for said elastic members (column 15, lines 11-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the program taught by Liu et al. with the servomotor in the method of

applying curved elastic to a moving web disclosed by Blenke et al. The motivation would have been to improve accuracy, synchronization, and flexibility of production of the articles (column 15, lines 11-25). It is well settled that it is not inventive to broadly provide a mechanical or automatic means to replace a manual activity which has accomplished the same results. *In re Venner and Bowser* 120 USPQ192.

36. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,525,173 to Blenke et al. in view of U.S. Patent No. 6,505,791 to Syndikus et al. and U.S. Patent No. 6,123,882 to Uchida et al. as applied to claims 9, 11, 13, 15-19, and 22 above, and further in view of U.S. Patent No. 6,574,520 to Liu et al.

37. As to claim 10, Blenke et al. discloses an apparatus for applying curved elastic to a moving web, including a servomotor (82) is used to rotate the rotary shaft (47; column 8, lines 50-52). However, Blenke et al. does not specifically disclose said servomotor is actuated by a controller containing therein a program adapted to rotate said servomotor on the basis of a running speed of at least said web in said machine direction and said layout desired for said elastic members.

38. Liu et al. discloses an apparatus for manufacturing absorbent articles, including using servomotors actuated by a controller containing therein a program adapted to rotate said servomotor on the basis of a running speed of at least said web in said machine direction and said layout desired for said elastic members (column 15, lines 11-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the program taught by Liu et al. with the servomotor in

the apparatus for applying curved elastic to a moving web disclosed by Blenke et al. The motivation would have been to improve accuracy, synchronization, and flexibility of production of the articles (column 15, lines 11-25). It is well settled that it is not inventive to broadly provide a mechanical or automatic means to replace a manual activity which has accomplished the same results. *In re Venner and Bowser* 120 USPQ192.

39. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,525,173 to Blenke et al. in view of U.S. Patent No. 6,505,791 to Syndikus et al., U.S. Patent No. 6,123,882 to Uchida et al., and U.S. Patent No. 5,660,664 to Herrmann as applied to claims 1-2, 4, 6-7, 12, 14, and 23 above, and further in view of U.S. Patent No. 6,895,835 to Cordeiro.

40. With respect to claim 24, Blenke et al. discloses a servomotor is used as said motor (column 8, lines 41-45). However, Blenke et al. does not specifically disclose the angular rate of acceleration of the arm.

41. Cordeiro discloses a method of improving motor performance, including conventional servomotors are know in the art to have an angular acceleration of up to 15,000 rad/sec^2 (See Table 1). It would have been obvious to one of ordinary skill in the art to use a conventional servomotor with an angular acceleration of up to 15,000 rad/sec^2 as taught by Cordeiro for the servomotor of Blenke et al. The motivation would have been to use a servomotor capable of creating the desired elastic member oscillations.

42. Claims 9, 11, 13, 15-19, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,525,173 to Blenke et al. in view of U.S. Patent No. 6,505,791 to Syndikus et al. and U.S. Patent No. 6,106,944 to Heikkila et al.

43. As to claim 9, Blenke et al. discloses a servomotor is used as said motor (column 8, lines 41-45).

44. As to claim 11, Blenke et al. discloses an apparatus for applying curved elastic to a moving web, including an arm being adapted to swing around the rotary shaft as the rotary shaft rotates (column 8, lines 50-52). However, Blenke et al. does not specifically disclose the materials used to make the arm.

45. Heikkila et al. discloses a structural member, including structural members of a composite material comprising any one selected from the group consisting of carbon fiber, glass fiber, metallic fiber, synthetic fiber, semi-synthetic fiber and natural fiber and any one selected from the group consisting of thermoplastic synthetic resin and thermosetting synthetic resin (column 1, lines 10-28; column 6, lines 1-9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Heikkila's teaching of a composite material for the material composition of the swinging arm disclosed by Blenke et al. The motivation would have been to use a material with increased strength in a high-speed manufacturing apparatus (column 1, lines 26-28).

46. As to claim 13, Blenke et al. discloses said elastic members (22) are directed from said guide means (44) to said nip between said pair of press rolls (70/72) so that

said elastic members coincide with a tangential line with respect to a region in which said pair of press rolls substantially contact each other (See Figure 2A).

47. As to claim 15, Blenke et al. discloses an apparatus for applying curved elastic to a moving web, including a pair of press rolls (70/72) substantially contacting each other, said press rolls (70/72) rotating in said machine direction around respective axes extending in said cross direction so as to feed said web (24) in said machine direction, and a guiding mechanism (44) located upstream of said pair of said press rolls (70/72) as viewed in said machine direction to oscillate said elastic members (22) in said cross direction; wherein said guide mechanism (44) comprises; a motor (82) having a rotary shaft (47) extending in a direction crossing said axes arid adapted to repeatedly reverse a rotational direction (column 8, lines 50-52); an arm connected with said rotary shaft and extending in a direction crossing said rotary shaft, said arm being formed on its distal end with said guiding element(44) through which at least one of said elastic members (22) is passable, and said arm being adapted to swing around said rotary shaft as said rotary shaft rotates; and at least one feed member (34) located upstream of said rotary shaft (47) as viewed in said machine direction and adapted to direct said elastic members toward said guiding element (44); wherein an axis of said rotary shaft including press rolls (70/72) perpendicular to the guiding mechanism (44/46; See Figures 1-2A). Blenke et al. does not specifically disclose an arm connected directly with said rotary shaft or the rotary shaft is stationary relative to the axes of said press rolls or the materials used to make the arm.

48. Syndikus et al. discloses a thread traversing device, including it is known in the art of filament traversing devices to use a motor (8) having a rotary shaft (9) extending in a direction crossing said axes and adapted to repeat reversal of its rotational direction (See Figure 2); an arm (7) connected directly with said rotary shaft (9) and extending in a direction crossing said rotary shaft (9), said arm being formed on its distal end with guide means adapted for passage (15) of said elastic members, and said arm being adapted to swing around said rotary shaft as said rotary shaft rotates. It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the directly attached arm taught by Syndikus for the pivoting means disclosed by Blenke et al. The motivation would have been to provide better control over the oscillating movement of the guide means. Syndikus et al. discloses a thread traversing device, including it is known in the art of filament traversing devices with said rotary shaft (9) is stationary relative to the axes of said press rolls (See Figure 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the directly connecting arm taught by Syndikus for the pivoting means disclosed by Blenke et al. The motivation would have been to provide better control over the oscillating movement of the guide means.

49. Heikkila et al. discloses a structural member, including structural members of a composite material comprising any one selected from the group consisting of carbon fiber, glass fiber, metallic fiber, synthetic fiber, semi-synthetic fiber and natural fiber and any one selected from the group consisting of thermoplastic synthetic resin and thermosetting synthetic resin (column 1, lines 10-28; column 6, lines 1-9). It would have

been obvious to one of ordinary skill in the art at the time the invention was made to use Heikkila's teaching of a composite material for the material composition of the swinging arm disclosed by Blenke et al. The motivation would have been to use a material with increased strength in a high-speed manufacturing apparatus (column 1, lines 26-28).

50. As to claim 16, Blenke et al. discloses a method of applying curved elastic to a moving web, including press rolls (70/72) with the elastic members are being fed and oscillated at the same time towards said nip (See Figure 2). . However, Blenke et al. does not specifically disclose maintaining an axis of said rotary shaft stationary relative to the axes of said press rolls while the elastic members are being fed and oscillated at the same time towards said nip.

51. Syndikus et al. discloses a thread traversing device, including it is known in the art of filament traversing to maintain an axis of said rotary shaft (9) stationary relative to the axes of said press rolls (See Figure 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the directly connecting arm taught by Syndikus for the pivoting means disclosed by Blenke et al. The motivation would have been to provide better control over the oscillating movement of the guide means.

52. As to claim 17, Blenke et al. discloses said elastic members (22) are attached to said web by means of the adhesive only (column 4, lines 49-53) in regions corresponding to leg openings of the disposable wearing article being manufactured (column 9, line 56-column 10, line 5); said method further comprising cutting the elastic members between said regions so that the cut elastic members do not extend across an

entire width of the disposable wearing article being manufactured (column 10, lines 25-28), and attaching an absorbent core to said web, wherein portions of the cut elastic members that have not been attached to said web contract to a relaxed state and are located near transverse edges of the absorbent core (column 11, lines 41-56).

53. As to claim 18, Blenke et al. discloses controlling rotational oscillating movements of the arm of each said guide means such that at least one of (i) the desired layout and (ii) a stretching ratio of the elastic members fed by one guide means is different from that of the elastic members fed by the other guide means (column 4, lines 2-4).

54. As to claim 19, Blenke et al. does not specifically disclose a rotational axis about which the arm swings coincides with a rotational axis of the rotary shaft.

55. Syndikus et al. discloses a thread traversing device, including it is known in the art of filament traversing to use a rotational axis about which the arm swings coincides with a rotational axis of the rotary shaft (See Figure 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the directly connecting arm taught by Syndikus for the pivoting means disclosed by Blenke et al. The motivation would have been to provide better control over the oscillating movement of the guide means.

56. As to claim 22, Blenke et al. discloses an apparatus for applying curved elastic to a moving web, including an arm being adapted to swing around the rotary shaft as the rotary shaft rotates (column 8, lines 50-52). However, Blenke et al. does not specifically disclose the materials used to make the arm. It would have been obvious to one having

ordinary skill in the art to have determined the optimum value of cause effective variables such as arm weight, specific gravity, bending modulus, and length through routine experimentation in the absence of a showing of criticality. *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990). However, even though applicant's modification results in great improvement and utility over the prior art, it may still not be patentable if the modification was within the capabilities of one skilled in the art. In re Sola, 22 CCPA (Patents) 1313, 77 F.2d 627, 25 USPQ 433; In re Normann et al., 32 CCPA (Patents) 1248, 150 F.2d 627, 66 USPQ 308; In re Irmscher, 32 CCPA (Patents) 1259, 150 F.2d 705, 66 USPQ 314. More particularly, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Swain et al., 33 CCPA (Patents) 1250, 156 F.2d 239, 70 USPQ 412; Minnesota Mining and Mfg. Co. v. Coe, 69 App. D.C. 217, 99 F.2d 986, 38 USPQ 213; Allen et al. v. Coe, 77 App. D.C. 324, 135 F.2d 11, 57 USPQ 136.

57. As to claim 27, Blenke et al. does not specifically disclose the materials used to make the arm.

58. Heikkila et al. discloses a structural member, including structural members of a composite material comprising thermosetting synthetic resin (column 1, lines 10-28; column 6, lines 1-9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Heikkila's teaching of a composite material for the material composition of the swinging arm disclosed by Blenke et al. The motivation would have been to use a material with increased strength in a high-speed manufacturing apparatus (column 1, lines 26-28).

59. Claims 1-2, 4, 6-7, 12, 14, 23, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,525,173 to Blenke et al. in view of U.S. Patent No. 6,505,791 to Syndikus et al. and U.S. Patent No. 6,106,944 to Heikkila et al. as applied to claims 9, 11, 13, 15-19, 22, and 27 above, and further in view of U.S. Patent No. 5,660,664 to Herrmann.

60. With respect to claim 1, Blenke et al. discloses a method of applying curved elastic to a moving web, including feeding at least a single continuous web (24) in a machine direction as a component member of a disposable wearing article being continuously manufactured, feeding continuous elastic members (22) toward at least one surface of said web while said continuous elastic members are oscillated in a cross direction relative to said machine direction (See Figure 1), and attaching said continuous elastic members in a stretched state (column 9, lines 31-33) to said one surface in a accordance with a desired layout, wherein: in the step of feeding said web, the web is fed to a nip between a pair of press rolls (70/72) substantially being in contact with each other and adapted to rotate in said machine direction around respective axes extending parallel to each other in said cross direction; in the step of feeding said elastic members, the elastic members (22) are fed from upstream of said pair of press rolls (70/72) to the nip between said press rolls (70/72) via guide means (44) adapted to oscillate said elastic members (22) in said cross direction, and in the step of attaching said elastic members, said elastic members (22) are attached to said web (24) by means of an adhesive (62); wherein each of said guide means comprises:

a motor (82) having a rotary shaft (47) extending in a direction crossing said axes and adapted to repeat reversal of its rotational direction (column 8, lines 50-52); an arm connected with said rotary shaft and extending in a direction crossing said rotary shaft (47), said arm being formed on its distal end with guide means adapted for passage (44) of said elastic members (22), and said arm being adapted to swing around said rotary shaft as said rotary shaft rotates; and at least one feed member (34) located upstream of said rotary shaft as viewed in said machine direction and adapted to direct said elastic members toward said guide means (44); and wherein, in the course of running from said feed member to said pair of press rolls via said guide means, said elastic members are attached to said web while said elastic members are oscillated in said cross direction by said arm connected with said rotary shaft so as to repeat reversal of its swinging direction; said process further comprising arranging said axes of said pair of press rolls (70/ 72) vertically, said rotary shaft (47) of said motor (82) extends in a horizontal direction and said arm extends in said vertical plane from said rotary shaft toward said nip between said pair of press rolls (See Figures 1-2A; column 8, lines 50-52). However, Blenke et al. does not specifically disclose an arm connected directly with said rotary shaft or the materials used to make the arm.

61. Syndikus et al. discloses a thread traversing device, including it is known in the art of filament traversing devices to use a motor (8) having a rotary shaft (9) extending in a direction crossing said axes and adapted to repeat reversal of its rotational direction (See Figure 2); an arm (7) connected directly with said rotary shaft (9) and extending in a direction crossing said rotary shaft (9), said arm being formed on its distal end with

guide means adapted for passage (15) of said elastic members, and said arm being adapted to swing around said rotary shaft as said rotary shaft rotates. It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the directly attached arm taught by Syndikus for the pivoting means disclosed by Blenke et al. The motivation would have been to provide better control over the oscillating movement of the guide means.

62. Hermann discloses a machine for applying elastic, including arranging said axes of said press rolls horizontally (29/32a), said rotary shaft of said motor vertically (65), and said arm to extend horizontally (50/52) from said rotary shaft toward said nip between said press rolls (See Figures 1-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to rearrange the apparatus of Blenke et al. by rotating the current orientation 90°, such that the axes of the press rolls are vertical, the rotary shaft is horizontal, and the arm extends vertically as shown by Hermann. The motivation would have been to allow for the application of elastic at high working speeds (column 1, lines 29-31). In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) (Claims to a hydraulic power press which read on the prior art except with regard to the position of the starting switch were held unpatentable because shifting the position of the starting switch would not have modified the operation of the device.).

63. Heikkila et al. discloses a structural member, including structural members of a composite material comprising any one selected from the group consisting of carbon fiber, glass fiber, metallic fiber, synthetic fiber, semi-synthetic fiber and natural fiber and any one selected from the group consisting of thermoplastic synthetic resin and

thermosetting synthetic resin (column 1, lines 10-28; column 6, lines 1-9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Heikkila's teaching of a composite material for the material composition of the swinging arm disclosed by Blenke et al. The motivation would have been to use a material with increased strength in a high-speed manufacturing apparatus (column 1, lines 26-28).

64. As to claim 2, Blenke et al. discloses a servomotor is used as said motor (column 8, lines 41-45).

65. As to claim 4, Blenke et al. discloses an apparatus for applying curved elastic to a moving web, including an arm being adapted to swing around the rotary shaft as the rotary shaft rotates (column 8, lines 50-52). However, Blenke et al. does not specifically disclose the materials used to make the arm.

66. Heikkila et al. discloses a structural member, including structural members of a composite material comprising any one selected from the group consisting of carbon fiber, glass fiber, metallic fiber, synthetic fiber, semi-synthetic fiber and natural fiber and any one selected from the group consisting of thermoplastic synthetic resin and thermosetting synthetic resin (column 1, lines 10-28; column 6, lines 1-9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Heikkila's teaching of a composite material for the material composition of the swinging arm disclosed by Blenke et al. The motivation would have been to use a material with increased strength in a high-speed manufacturing apparatus (column 1, lines 26-28).

67. As to claim 6, Blenke et al. discloses said elastic members (22) are directed from said guide means (44) to said nip between said pair of press rolls (70/72) so that said

elastic members are positioned in a plane a tangential to said press rolls in a region in which said press rolls substantially contact each other (See Figure 2A).

68. As to claim 7, Blenke et al. discloses said elastic members extend from said feed member to said guide means at a deviation angle of 10° or less relative to said vertical plane defined by the parallel axes of the press rolls (See Figure 2A).

69. Hermann discloses a machine for applying elastic, including arranging said axes of said press rolls horizontally (29/32a), said rotary shaft of said motor vertically (65), and said arm to extend horizontally (50/52) from said rotary shaft toward said nip between said press rolls (See Figures 1-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to rearrange the apparatus of Blenke et al. by rotating the current orientation 90º, such that the axes of the press rolls are vertical, the rotary shaft is horizontal, and the arm extends vertically as shown by Hermann. The motivation would have been to allow for the application of elastic at high working speeds (column 1, lines 29-31). In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) (Claims to a hydraulic power press which read on the prior art except with regard to the position of the starting switch were held unpatentable because shifting the position of the starting switch would not have modified the operation of the device.).

70. As to claim 12, Blenke et al. discloses said axes of said pair of press rolls (70/72) extend in a vertical plane, said rotary shaft (47) of said motor (82) extends in a horizontal plane and said arm extends in said vertical direction front said rotary shaft toward said nip between said pair of press rolls (See Figure 2A).

71. Hermann discloses a machine for applying elastic, including said axes of said press rolls extend horizontally (29/32a), said rotary shaft of said motor extends vertically (65), and said arm to extends horizontally (50/52) from said rotary shaft toward said nip between said press rolls (See Figures 1-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to rearrange the apparatus of Blenke et al. by rotating the current orientation 90º, such that the axes of the press rolls are vertical, the rotary shaft is horizontal, and the arm extends vertically as shown by Hermann. The motivation would have been to allow for the application of elastic at high working speeds (column 1, lines 29-31). In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) (Claims to a hydraulic power press which read on the prior art except with regard to the position of the starting switch were held unpatentable because shifting the position of the starting switch would not have modified the operation of the device.).

72. As to claim 14, Blenke et al. discloses said elastic members extend from said feed member to said guide means at a deviation angle of 10° or less relative to said vertical direction (See Figure 2A).

73. Hermann discloses a machine for applying elastic, including arranging said axes of said press rolls horizontally (29/32a), said rotary shaft of said motor vertically (65), and said arm to extend horizontally (50/52) from said rotary shaft toward said nip between said press rolls (See Figures 1-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to rearrange the apparatus of Blenke et al. by rotating the current orientation 90º, such that the axes of the press rolls are vertical, the rotary shaft is horizontal, and the arm extends vertically as shown by

Hermann. The motivation would have been to allow for the application of elastic at high working speeds (column 1, lines 29-31). In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950) (Claims to a hydraulic power press which read on the prior art except with regard to the position of the starting switch were held unpatentable because shifting the position of the starting switch would not have modified the operation of the device.).

74. As to claim 23, Blenke et al. discloses an apparatus for applying curved elastic to a moving web, including an arm being adapted to swing around the rotary shaft as the rotary shaft rotates (column 8, lines 50-52). However, Blenke et al. does not specifically disclose the materials used to make the arm. It would have been obvious to one having ordinary skill in the art to have determined the optimum value of cause effective variables such as arm weight, specific gravity, bending modulus, and length through routine experimentation in the absence of a showing of criticality. *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990). However, even though applicant's modification results in great improvement and utility over the prior art, it may still not be patentable if the modification was within the capabilities of one skilled in the art. In re Sola, 22 CCPA (Patents) 1313, 77 F.2d 627, 25 USPQ 433; In re Normann et al., 32 CCPA (Patents) 1248, 150 F.2d 627, 66 USPQ 308; In re Irmscher, 32 CCPA (Patents) 1259, 150 F.2d 705, 66 USPQ 314. More particularly, where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Swain et al., 33 CCPA (Patents) 1250, 156 F.2d 239, 70 USPQ 412; Minnesota Mining and Mfg. Co. v. Coe, 69 App. D.C. 217, 99 F.2d 986, 38 USPQ 213; Allen et al. v. Coe, 77 App. D.C. 324, 135 F.2d 11, 57 USPQ 136.

75. As to claim 25, Blenke et al. does not specifically disclose the rotary shaft is stationary relative to the axes of said press rolls.

76. Syndikus et al. discloses a thread traversing method, including it is known in the art of filament traversing devices that said rotary shaft (9) is stationary relative to the axes of said press rolls (See Figure 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the directly connecting arm taught by Syndikus for the pivoting means disclosed by Blenke et al. The motivation would have been to provide better control over the oscillating movement of the guide means.

77. As to claim 26, Blenke et al. does not specifically disclose the materials used to make the arm.

78. Heikkila et al. discloses a structural member, including structural members of a composite material comprising thermosetting synthetic resin (column 1, lines 10-28; column 6, lines 1-9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Heikkila's teaching of a composite material for the material composition of the swinging arm disclosed by Blenke et al. The motivation would have been to use a material with increased strength in a high-speed manufacturing apparatus (column 1, lines 26-28).

79. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,525,173 to Blenke et al. in view of U.S. Patent No. 6,505,791 to Syndikus et al., U.S. Patent No. 6,106,944 to Heikkila et al., and U.S. Patent No. 5,660,664 to

Herrmann as applied to claims 1-2, 4, 6-7, 12, 14, 23, and 25-26 above, and further in view of U.S. Patent No. 6,574,520 to Liu et al.

80. With respect to claim 3, Blenke et al. discloses a method of applying curved elastic to a moving web, including a servomotor (82) is used to rotate the rotary shaft (47; column 8, lines 50-52). However, Blenke et al. does not specifically disclose said servomotor is actuated by a controller containing therein a program adapted to rotate said servomotor on the basis of a running speed of at least said web in said machine direction and said layout desired for said elastic members.

81. Liu et al. discloses a method of manufacturing absorbent articles, including using servomotors actuated by a controller containing therein a program adapted to rotate said servomotor on the basis of a running speed of at least said web in said machine direction and said layout desired for said elastic members (column 15, lines 11-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the program taught by Liu et al. with the servomotor in the method of applying curved elastic to a moving web disclosed by Blenke et al. The motivation would have been to improve accuracy, synchronization, and flexibility of production of the articles (column 15, lines 11-25). It is well settled that it is not inventive to broadly provide a mechanical or automatic means to replace a manual activity which has accomplished the same results. *In re Venner and Bowser* 120 USPQ192.

82. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,525,173 to Blenke et al. in view of U.S. Patent No. 6,505,791 to Syndikus

et al. and U.S. Patent No. 6,106,944 to Heikkila et al. as applied to claims 9, 11, 13, 15-19, 22, and 27 above, and further in view of U.S. Patent No. 6,574,520 to Liu et al.

83. As to claim 10, Blenke et al. discloses an apparatus for applying curved elastic to a moving web, including a servomotor (82) is used to rotate the rotary shaft (47; column 8, lines 50-52). However, Blenke et al. does not specifically disclose said servomotor is actuated by a controller containing therein a program adapted to rotate said servomotor on the basis of a running speed of at least said web in said machine direction and said layout desired for said elastic members.

84. Liu et al. discloses an apparatus for manufacturing absorbent articles, including using servomotors actuated by a controller containing therein a program adapted to rotate said servomotor on the basis of a running speed of at least said web in said machine direction and said layout desired for said elastic members (column 15, lines 11-25). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the program taught by Liu et al. with the servomotor in the apparatus for applying curved elastic to a moving web disclosed by Blenke et al. The motivation would have been to improve accuracy, synchronization, and flexibility of production of the articles (column 15, lines 11-25). It is well settled that it is not inventive to broadly provide a mechanical or automatic means to replace a manual activity which has accomplished the same results. *In re Venner and Bowser* 120 USPQ192.

85. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,525,173 to Blenke et al. in view of U.S. Patent No. 6,505,791 to Syndikus et al., U.S. Patent No. 6,106,944 to Heikkila et al., and U.S. Patent No. 5,660,664 to Herrmann as applied to claims 1-2, 4, 6-7, 12, 14, 23, and 25-26 above, and further in view of U.S. Patent No. 6,895,835 to Cordeiro.

86. With respect to claim 24, Blenke et al. discloses a servomotor is used as said motor (column 8, lines 41-45). However, Blenke et al. does not specifically disclose the angular rate of acceleration of the arm.

87. Cordeiro discloses a method of improving motor performance, including conventional servomotors are know in the art to have an angular acceleration of up to 15,000 rad/sec^2 (See Table 1). It would have been obvious to one of ordinary skill in the art to use a conventional servomotor with an angular acceleration of up to 15,000 rad/sec^2 as taught by Cordeiro for the servomotor of Blenke et al. The motivation would have been to use a servomotor capable of creating the desired elastic member oscillations.

Response to Arguments

88. Applicant's arguments filed 2/21/08 have been fully considered but they are not persuasive.

89. In response to applicant's argument that there is no suggestion to combine the references of Syndikus and Blenke, the examiner recognizes that obviousness can only

be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation is found in the knowledge generally available to one of ordinary skill in the art. It is not necessary that the prior art suggest expressly or in so many words the changes or possible improvements the inventor made but that the knowledge be clearly present. *In re Sernaker*, 217 USPQ 1 (Fed. Cir. 1983). One of ordinary skill in the art would recognize the directly attached arm of Syndikus is directly connected to the motor, and therefore more responsive to changes in direction and velocity versus the indirectly attached arm of Blenke. This serves as the necessary motivation to obtain the current invention. Furthermore, the simple substitution of one known element (the elongated arm of Syndikus) for another (the oscillating arrangement of Blenke) would achieve the predictable result of providing improved arm control during oscillations.

90. As to applicant's argument that Blenke teaches away from the arrangement of Syndikus, examiner disagrees. Firstly, column 1, lines 40-46 refers to convention elastic placing methods. As Syndikus was patented after Blenke, it cannot be considered conventional to the disclosure of Blenke. There is no reference anywhere in Blenke to a single elongated arm similar to the device of Syndikus. Consequently, Blenke cannot be found to teach away from the arrangement of Syndikus.

91. With respect to applicant's argument that there is no reasonable expectation of success in the combination of Uchida with Blenke, examiner disagrees. Fiber-resin composites are a well-known substance that is commonly used to replace wooden and metal articles due to their low cost, increased strength, and flexibility. They are used in a wide range of industries. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a well-known material based on its low cost, high strength, and low weight as the material in the oscillating arm of Blenke. The success for these composites in a variety of industries yields a reasonable expectation of success as an oscillating arm in the current device.

92. With respect to applicant's arguments regarding claim 18, it is noted that the stretch ratio of an elastic member is controlled by how far it is stretched. It is inherent that elastic members arrayed in different, independent patterns would undergo different stretch ratios. Blenke's disclosure of providing elastic members in independent curvilinear paths would result in these elastic members having a different stretching ratio based on the separate paths of the elastic members. Consequently this argument is not persuasive.

93. As to applicant's arguments regarding claims 22-23, these arguments are not persuasive. One of ordinary skill in the art would recognize the weight, specific gravity, bending modulus, and length of the oscillating arm may be varied depending on the size and shape of the desired curvilinear path of the elastic members. Altering these properties of the arm would enable one to change the pattern profile. Therefore, the

optimal values for these properties are obtainable through routine experimentation in the absence of a showing of criticality, based on the preferred elastic pattern.

94. As to claims 24 and 26-27, examiner notes these newly presented claims have been rejected under new art, rendering the arguments moot.

Conclusion

95. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KIMBERLY K. MCCLELLAND whose telephone number is (571)272-2372. The examiner can normally be reached on 8:00 a.m.-5 p.m. Mon-Thr.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Philip C. Tucker can be reached on (571)272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. K. M./
Examiner, Art Unit 1791

KKM

/Philip C Tucker/
Supervisory Patent Examiner, Art Unit 1791